

Ali Farmani

List of Publications by Year in descending order

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76
papers

2,452
citations

172386

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80
docs citations

80
times ranked

999
citing authors

#	ARTICLE	IF	CITATIONS
1	High Sensitivity and Tunable Nanoscale Sensor Based on Plasmon-Induced Transparency in Plasmonic Metasurface. IEEE Sensors Journal, 2018, 18, 7047-7054.	2.4	124
2	Broadly tunable and bidirectional terahertz graphene plasmonic switch based on enhanced Goos-Hänchen effect. Applied Surface Science, 2018, 453, 358-364.	3.1	122
3	Tunable resonant Goos-Hänchen and Imbert-Fedorov shifts in total reflection of terahertz beams from graphene plasmonic metasurfaces. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 1097.	0.9	111
4	Nanoscale, tunable, and highly sensitive biosensor utilizing hyperbolic metamaterials in the near-infrared range. Applied Optics, 2018, 57, 9447.	0.9	111
5	Three-dimensional FDTD analysis of a nanostructured plasmonic sensor in the near-infrared range. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 401.	0.9	111
6	Highly sensitive nano-scale plasmonic biosensor utilizing Fano resonance metasurface in THz range: Numerical study. Physica E: Low-Dimensional Systems and Nanostructures, 2018, 104, 233-240.	1.3	97
7	Graphene Sensor Based on Surface Plasmon Resonance for Optical Scanning. IEEE Photonics Technology Letters, 2019, 31, 643-646.	1.3	89
8	Supersensitive and Tunable Nano-Biosensor for Cancer Detection. IEEE Sensors Journal, 2019, 19, 4874-4881.	2.4	88
9	Design of a tunable graphene plasmonic-on-white graphene switch at infrared range. Superlattices and Microstructures, 2017, 112, 404-414.	1.4	85
10	A label-free graphene-based nanosensor using surface plasmon resonance for biomaterials detection. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 116, 113730.	1.3	83
11	2D-FDTD simulation of ultra-compact multifunctional logic gates with nonlinear photonic crystal. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 811.	0.9	67
12	Design of a High Extinction Ratio Tunable Graphene on White Graphene Polarizer. IEEE Photonics Technology Letters, 2018, 30, 153-156.	1.3	66
13	Tunable Plasmon Induced Transparency in Graphene and Hyperbolic Metamaterial-Based Structure. IEEE Photonics Journal, 2019, 11, 1-10.	1.0	61
14	Analytical modeling of highly tunable giant lateral shift in total reflection of light beams from a graphene containing structure. Optics Communications, 2017, 391, 68-76.	1.0	60
15	Ultra high-sensitivity and tunable dual-band perfect absorber as a plasmonic sensor. Optics and Laser Technology, 2020, 127, 106201.	2.2	58
16	Systematic engineering of a nanostructure plasmonic sensing platform for ultrasensitive biomaterial detection. Optics Communications, 2020, 474, 126178.	1.0	55
17	Tunable graphene plasmonic Y-branch switch in the terahertz region using hexagonal boron nitride with electric and magnetic biasing. Applied Optics, 2017, 56, 8931.	0.9	51
18	Tunable mantle cloaking utilizing graphene metasurface for terahertz sensing applications. Optics Express, 2019, 27, 34824.	1.7	47

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19	Particle swarm optimization and finite-difference time-domain (PSO/FDTD) algorithms for a surface plasmon resonance-based gas sensor. <i>Journal of Computational Electronics</i> , 2019, 18, 1354-1364.	1.3	46
20	Improving the performance of nanostructure multifunctional graphene plasmonic logic gates utilizing coupled-mode theory. <i>Applied Physics B: Lasers and Optics</i> , 2019, 125, 1.	1.1	43
21	A Plasmonic Nano-Biosensor Based on Two Consecutive Disk Resonators and Unidirectional Reflectionless Propagation Effect. <i>IEEE Sensors Journal</i> , 2020, 20, 9097-9104.	2.4	43
22	Nanoscale Sensor-Based Tunneling Carbon Nanotube Transistor for Toxic Gases Detection: A First-Principle Study. <i>IEEE Sensors Journal</i> , 2019, 19, 7373-7377.	2.4	42
23	Nano-scale multifunctional logic gate based on graphene/hexagonal boron nitride plasmonic waveguides. <i>IET Optoelectronics</i> , 2020, 14, 37-43.	1.8	40
24	Tunable broadband polarization converters based on coded graphene metasurfaces. <i>Scientific Reports</i> , 2021, 11, 1296.	1.6	40
25	On-Chip Single-Mode Optofluidic Microresonator Dye Laser Sensor. <i>IEEE Sensors Journal</i> , 2020, 20, 3556-3563.	2.4	34
26	Graphene sensing nanostructure for exact graphene layers identification at terahertz frequency. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 124, 114375.	1.3	34
27	Design and Simulation of a Novel Tunable Terahertz Biosensor Based on Metamaterials for Simultaneous Monitoring of Blood and Urine Components. <i>Plasmonics</i> , 2021, 16, 1537-1548.	1.8	33
28	Double-Ring Resonator Plasmonic Refractive Index Sensor Utilizing Dual-Band Unidirectional Reflectionless Propagation Effect. <i>Plasmonics</i> , 2021, 16, 1277-1285.	1.8	32
29	Tunable plasmonics photodetector in near-infrared wavelengths using graphene chemical doping method. <i>AEU - International Journal of Electronics and Communications</i> , 2020, 127, 153472.	1.7	30
30	Optical nanosensors for cancer and virus detections. , 2020, , 419-432.		30
31	A multimode graphene plasmonic perfect absorber at terahertz frequencies. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 122, 114159.	1.3	30
32	Semi-analytical modeling of high performance nano-scale complementary logic gates utilizing ballistic carbon nanotube transistors. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018, 104, 286-296.	1.3	29
33	Analytical Modeling and Design of a Graphene Metasurface Sensor for Thermo-Optical Detection of Terahertz Plasmons. <i>IEEE Sensors Journal</i> , 2021, 21, 4525-4532.	2.4	26
34	Reconfigurable and scalable 2,4-and 6-channel plasmonics demultiplexer utilizing symmetrical rectangular resonators containing silver nano-rod defects with FDTD method. <i>Scientific Reports</i> , 2021, 11, 13628.	1.6	26
35	Exploring surface plasmon resonance ring resonator structure for high sensitivity and ultra-high-Q optical filter with FDTD method. <i>Optical and Quantum Electronics</i> , 2022, 54, 1.	1.5	25
36	Surface Plasmon Resonance-Based SiO ₂ Kretschmann Configuration Biosensor for the Detection of Blood Glucose. <i>Silicon</i> , 2022, 14, 3081-3090.	1.8	24

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37	High performance polarization-independent Quantum Dot Semiconductor Optical Amplifier with 22 dB fiber to fiber gain using Mode Propagation Tuning without additional polarization controller. Optics and Laser Technology, 2017, 93, 127-132.	2.2	23
38	Enhanced sensing of terahertz surface plasmon polaritons in graphene/J-aggregate coupler using FDTD method. Diamond and Related Materials, 2022, 125, 109005.	1.8	23
39	Numerical Modeling of an Integrable and Tunable Plasmonic Pressure Sensor with Nanostructure Grating. Plasmonics, 2021, 16, 27-36.	1.8	22
40	Highly polarization-sensitive, broadband, low dark current, high responsivity graphene-based photodetector utilizing a metal nano-grating at telecommunication wavelengths. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 1192.	0.9	22
41	SiO ₂ â€“Silver Metasurface Architectures for Ultrasensitive and Tunable Plasmonic Biosensing. Plasmonics, 2020, 15, 1935-1942.	1.8	17
42	A High Speed and Low Power Image Encryption with 128-Bit AES Algorithm. International Journal of Computer and Electrical Engineering, 2012, , 367-372.	0.2	15
43	Simulation of a refractive index sensor based on the Vernier effect and a cascaded PANDA and Mach-Zehnder interferometer. Journal of Computational Electronics, 2021, 20, 1599-1610.	1.3	14
44	A robust and energy-efficient near-threshold SRAM cell utilizing ballistic carbon nanotube wrap-gate transistors. AEU - International Journal of Electronics and Communications, 2019, 110, 152874.	1.7	13
45	Design and performance analysis of wrap-gate CNTFET-based ring oscillators for IoT applications. The Integration VLSI Journal, 2020, 70, 116-125.	1.3	12
46	Carbon nanotube field effect transistorsâ€“based gas sensors. , 2020, , 171-183.		12
47	Steering of Guided Light with Graphene Metasurface for Refractive Index Sensing with High Figure of Merits. Plasmonics, 2022, 17, 305-314.	1.8	12
48	FEM analysis of a $\lambda > 3 \lambda / 125$ high sensitivity graphene plasmonic biosensor for low hemoglobin concentration detection. Applied Optics, 2022, 61, 120.	0.9	12
49	Nanosensors for street-lighting system. , 2020, , 209-225.		11
50	Non-Destructive Label-Free Biomaterials Detection Using Tunneling Carbon Nanotube-Based Biosensor. IEEE Sensors Journal, 2021, 21, 8847-8854.	2.4	11
51	Figure of merit enhancement of surface plasmon resonance biosensor based on Talbot effect. Optical and Quantum Electronics, 2021, 53, 1.	1.5	11
52	Sensitivity-Enhanced Surface Plasmon Resonance Sensor with Bimetal/ Tungsten Disulfide (WS ₂)/MXene (Ti ₃ C ₂ T _x) Hybrid Structure. Plasmonics, 2022, 17, 1973-1984.	1.8	11
53	Plasmon-induced transparency sensor for detection of minuscule refractive index changes in ultra-low index materials. Scientific Reports, 2021, 11, 21692.	1.6	10
54	Design Optimization and Fabrication of Graphene/J-Aggregate Kretschmann-Raether Devices for Refractive Index Sensing Using Plasmon-Induced Transparency Phenomena. Plasmonics, 2022, 17, 811-821.	1.8	10

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55	Engineering of metallic nanorod-based hyperbolic metamaterials for broadband applications operating in the infrared regime. <i>Applied Nanoscience (Switzerland)</i> , 2021, 11, 229-240.	1.6	9
56	A tunable nonlinear plasmonic multiplexer/demultiplexer device based on nanoscale ring resonators. <i>Photonic Network Communications</i> , 2021, 42, 209-218.	1.4	8
57	Numerical analysis of tunable nonlinear plasmonic router based on nanoscale ring resonators. <i>Optical and Quantum Electronics</i> , 2020, 52, 1.	1.5	7
58	Analytical and Numerical Models of a Highly Sensitive MDM Plasmonic Nano-structure in Near-infrared Range. <i>Plasmonics</i> , 2021, 16, 413-418.	1.8	7
59	Polarization-dependent plasmonic nano-tweezer as a platform for on-chip trapping and manipulation of virus-like particles. <i>IEEE Transactions on Nanobioscience</i> , 2021, PP, 1-1.	2.2	7
60	Black Phosphorous-Based Nanostructures for Refractive Index Sensing with High Figure of Merit in the Mid-infrared. <i>Plasmonics</i> , 2022, 17, 639-646.	1.8	7
61	Analysis of optical power budget in DWDM-FSO link under outdoor atmospheric channel model. <i>Optical and Quantum Electronics</i> , 2021, 53, 1.	1.5	6
62	Design and Analytical Evaluation of a High Resistance Sensitivity Bolometer Sensor Based on Plasmonic Metasurface Structure. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2022, 28, 1-7.	1.9	5
63	A high performance hardware implementation image encryption with AES algorithm. <i>Proceedings of SPIE</i> , 2011, , .	0.8	4
64	Fabrication Friendly Plasmonic Metasurface Sensing and Switching Configuration Based on Plasmonic Induced Absorption: Analytical and Numerical Evaluation. <i>Plasmonics</i> , 2022, 17, 881-891.	1.8	4
65	Emerging advanced photonics applications of graphene and beyond-graphene 2D materials: Recent advances. <i>Journal of Materials Research</i> , 2022, 37, 391-404.	1.2	4
66	Recent Advances in CNT-based FET Transistor Biosensors to Detect Biomarkers of Clinical Significance. <i>Silicon</i> , 2022, 14, 9275-9281.	1.8	4
67	Fully Integrated, 80 GHz Bandwidth, 1.3 m InAs/InGaAs CW-PW Quantum Dot Passively Colliding-Pulse Mode-Locked (CPM) Lasers for IR Sensing Application. <i>IEEE Sensors Journal</i> , 2022, 22, 6528-6535.	2.4	4
68	Smart inverters with broadband light absorption enhancement of nanostructure plasmonic solar absorber using PSO algorithms and FDTD method. <i>Optical Review</i> , 2022, 29, 327-334.	1.2	4
69	Graphene-based field effect transistor (GFET) as nanobiosensors. , 2022, , 269-275.		3
70	Terahertz analysis of a highly sensitive MIM-SRR-TiO ₂ nanostructure for bio-sensor applications with the FDTD method. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2022, 39, 223.	0.9	3
71	Outstanding tunable electrical and optical characteristics in monolayer silicene at high terahertz frequencies. <i>Journal of Computational Electronics</i> , 0, , .	1.3	2
72	Investigation of the 16O+194Pt reaction: One- and two-dimensional dynamical interpretation. <i>International Journal of Modern Physics E</i> , 2017, 26, 1750013.	0.4	1

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73	Battery-on-a-chip. , 2021, , 447-461.		1
74	Nanogenerators: An introduction. , 2021, , 47-59.		0
75	Power supplies for corrosion prevention and monitoring at the nanoscale. , 2021, , 543-554.		0
76	Graphene-based devices for smart cities. , 2021, , 491-514.		0